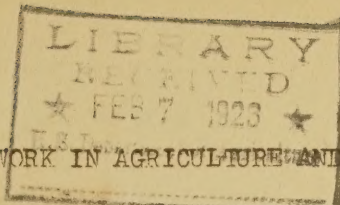


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COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

U. S. Department of Agriculture
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DEVELOPMENT OF FRUIT DEMONSTRATION WORK

An address by C. P. Close, Extension
Pomologist, given at the meeting of
the American Society for Horticultural
Science, Boston, Mass., December 27,
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Introduction

In considering the lines of fruit demonstration work to be attacked in any State, one should decide upon the most important needs of the fruit industry and then hit those needs hard while still following a well balanced program. If the trees and plants need feeding more than anything else, then widespread fertilizer demonstrations should be started to cover as many fruit sections as possible and make the project so big that the whole State will take notice. The point is to do the very important things in a great big way and get somewhere with them and forget the little things and the personal service once so popular. An example is the fruit fertilizer work in Michigan where tree fruits and bush fruits in many counties throughout the State are used in one big plant feeding projects. This is worth thousands of dollars to Michigan fruit growers now and will increase in value several fold in the next few years. Other examples are tree pruning in Oregon where 75 per cent of the fruit growers in the principal fruit sections have adopted the extension system taught, and in Washington where orchard cover and shade crops receive State wide attention.

Cooperation with Business Interests.

There is a wide field of service for the fruit specialist in bringing the fruit grower and business interests together as has been done in one instance in Missouri in inducing druggists to carry stocks of spray materials at reasonable prices. Contacts should be formed with manufacturers or dealers in all kinds of spraying materials, spraying equipment, fertilizers, orchard machinery, barrels, and any other necessary supplies. The business interests must be shown the amount of supplies needed, the purpose, the time when needed, and be given the assurance that such supplies will be purchased. Ready to serve brands, as of spray mixtures for instance, are desirable for many people who will not do the things it takes time or skill to perform. Druggists might be given circulars of information on fruit and garden diseases and insects and methods of control. Sources of cover crop seeds, fertilizers, barrels, crates, etc., might be located and price quotations obtained. This of course would be done in cooperation with county agents who would attend to the details within the counties, but would not become financial agents.

Lines of General Work.

Of all the general lines of work that of tree pruning is undoubtedly the most popular. In tree pruning the trend is toward less cutting of branches consistent with good shape of top. Pruning schools and pruning tours are most serviceable in this work. A pruning project should be continued at least three, or better five years on the same trees. The high renewal system of fruit tree pruning now popular on the Pacific Coast is worthy of careful study and trial throughout the country. The use of fertilizers and cover crops is increasing and in the Pacific Northwest cover crops are almost spectacular in their beneficial results in orchards. Spraying is still the limiting factor in good fruit production throughout the country. The various lines of orchard soil management are as important as ever. The work with small fruits and grapes might well be increased several fold. As a sidelight on fruit demonstration work it may be mentioned that in the Southern States last year under the direction of the home demonstration agents there were 9394 women doing orchard demonstration work and 9186 doing demonstration work with small fruits and grapes. This work consisted largely of planting, pruning and spraying. This would indicate that it might be practicable to start orchard work with women in the other states.

Spray Rings.

The spray ring is the salvation of many of the home and farm orchards and is working successfully in several States. Iowa is still far in the lead with 654 spray rings in operation this year according to reports of the county agents. Of these 213 used power sprayers and 441 used barrel pumps. It would be well for other States to organize spray rings as fast as possible not only to save home and farm orchards, but also to develop the spirit of cooperation among farmers. It is a real pleasure to visit members of spray rings and hear their words of praise over the results obtained. By training the county agents and a few leaders the work may be largely turned over to them, but the State specialist should make a visit or two each year to give advice as needed and to keep the project moving.

A distinction has been made between the home apple orchard and the farm apple orchard, the former being only large enough to furnish fruit for the family and the latter being semi-commercial in size. I believe the real home orchard is what we should work for with only enough summer and fall varieties for seasonal needs, thus having the bulk of the crop of winter varieties. Ten or twelve bearing trees would meet this need. One difficulty last summer and fall in the spray ring work was the production of a heavy crop of summer and fall apples for which there was no sale. The weather was hot, the fall and late summer varieties ripened in a bunch and the market became glutted and continued so for several weeks. It will be highly desirable, if not absolutely necessary, to organize each spray ring having farm orchards into a packing and selling group to handle the surplus crop. This would make a good starting point for cooperative marketing.

Cooperative Packing and Selling.

As fruit growing becomes more highly developed, cooperative packing and selling becomes a desirable necessity. This idea was well worked out in New York recently and has given excellent satisfaction. Ohio organized several local associations this year and is pleased with results. In sections away from good local markets the association way is one of the best means of putting honestly packed fruits on the market and association organization ought to be taken up by other states.

Cooperation in Local Fruit Sales.

There is a big opportunity in helping to sell the farm orchard crop surplus either at the farm or in the local market, and a project of this kind is worth while. Advertising by local paper, handbills, or road signs, will direct the consumers' attention to the point of supply. Recipes on the preparation of fruits for serving will be helpful. The local merchants should be induced to handle good fruit only and at reasonable prices in convenient packages. Fresh supplies should be brought in only as fast as they can be sold. Assistance should be given the merchants in advertising by variety names and special uses of the different varieties. In some instances it would be practicable to rent a storeroom and sell fruit in any quantity as is being done with citrus fruits at the present time. Special ads will bring flocks of purchases to these salesrooms.

Cooperation with Nutrition Specialists.

A big and useful field for fruit and vegetable specialists is opening up in connection with the work of extension specialists in nutrition who are attacking the food problems of farm and village people. These specialists know much about the nutritive value and digestive possibilities of fruits and vegetables, and can recommend such combinations in the diet as will serve not only to assist very materially in preserving good health, but also to repair certain ills brought about by improper diets. There are many cases of sluggish livers, faulty starch digestion, high blood pressure, and even diabetes, which are benefitted by the proper use of fruits, or vegetables, or both. In a number of States nutrition specialists are definitely recommending the use of at least one fruit and one vegetable, but preferably two fruits and two vegetables, besides Irish or sweet potatoes, in the daily diet. Food selection demonstrators are being enrolled to undertake to provide this amount of vegetables for their families. The food preservation project is being preached as a systematic method of estimating the amount of fruits and vegetables that must be stored or canned to meet these needs of the individual family during non-producing months.

The vegetable specialists might well cooperate in planning the garden giving a list of crops for spring, summer, fall and winter use, the space and amount of seed and fertilizer or manure required for each, the time and method of planting, the care of crops with respect to cultivation and pest control, the best maturity condition for gathering, use and storage of crops, the best varieties especially adapted for home canning, and the making of storage pits and building of storage cellars.

Cooperative Packing and Selling

As fruit packing becomes more highly developed, cooperative packing and selling becomes a desirable necessity. This idea was well worked out in New York recently and has given excellent satisfaction. One organized several local associations this year and is pleased with results. In addition, they have good local markets the association says is one of the best means of getting honestly packed fruit on the market and association organization ought to be taken up by other states.

Cooperation in Local Fruit Sales

There is a big opportunity in helping to sell the fruit orchard crop surplus either at the farm or in the local market, and a project of this kind is worth while. Encouraging by local papers, pamphlets, or town signs, will attract the customers' attention to the point of surplus. Besides on the proposition of fruit for serving will be helped. The local merchants should be induced to handle products only and at reasonable prices in convenient packages. Fresh supplies should be brought in only as fast as they can be sold. Assistance should be given the merchants in advertising by variety signs and special rates of the different varieties. In some instances it could be practically to rent a storeroom and sell fruit in any quantity as is being sold with the fruit at the present time. Special ads will bring those of customers to these salesrooms.

Cooperation with Retailers and Specialists

A big and useful field for fruit and vegetable specialists is opening up in connection with the work of extension specialists in nutrition who are attacking the food problems of farm and village people. These specialists know much about the nutritive value and digestive possibilities of fruit and vegetables, and can recommend such combinations in the diet as will serve not only to assist very particularly in preventing food habits, but also to retain certain life benefits about by improper diets. There are many cases of indigestion, liver, kidney stomach ailments, high blood pressure, and even diabetes, which are benefited by the proper use of fruit, or vegetables, or both. In a number of States nutrition specialists are habitually recommending the use of at least one fruit and one vegetable, but particularly the fruit and the vegetable. Nutrition helps in every respect, in the daily diet. Food selection demonstrates and values needed to undertake to provide this means of vegetable for fruit habits. The food preservation project is being presented as a systematic method of assisting the means of fruit and vegetables that must be stored or canned to meet the needs of the individual family during non-producing months.

The vegetable specialists might well cooperate in planning the garden giving a list of crops for spring, summer, fall and winter use, the amount of seed and fertilization to be used, the time and method of planting, the care of crops, the method of marketing and cost control. The best marketing condition for gathering, use and storage of crops, the best varieties especially adapted for home canning, and the making of average size and packing of storage crops.

There is really a vital need in the human system for more of the salad plants and greens, and a good many of these are now available for practically the whole growing season and several may be taken from the late fall garden and stored for early winter use. The humble cabbage, carrot, and rutabaga have now advanced to the vitamine class, and the lowly tomato ranks with the Sunkist orange and lemon in antiscorbutic value. Rhubarb may be made an all-year crop by having a few extra plants for winter forcing. These are a few suggestions for the vegetable specialist. The nutrition specialists might well revise an old familiar slogan to read, "Two vegetables a day will keep the doctor away".

The fruit specialist can cooperate by advising the kinds, varieties and number of plants of small fruits and grapes for the fruit garden, and the way to plant, prune, cultivate, train, and care for them. The fruit garden is one of the most important items connected with the home. Tree fruits might or might not be included in the project.

As a people we are all remiss, some very much more so than others, in good healthy home living. There are not enough farm and village homes with well balanced fruit and vegetable meals, and it is a part of our job as extension specialists to help create the desire and demonstrate the way to grow better things for the home. I do not mean that we should "live to eat" but rather that we should "eat more intelligently to live better and longer". Most farming people spend more than 300 days and eat a thousand meals at home each year. During the last two or three years comparatively few farmers have made more than a living, and many have only existed and have lost their farms and homes. If their living is their most certain reward, why not have this reward as happy and satisfying as it can be made? A little more time, thought, and work with fruits and vegetables, will help toward better living and this amount of time and effort taken from producing unprofitable crops will be a blessing. But "here's the rub", and I know it as well as anyone, how can the average farmer or laborer be conjured into the mental attitude of desiring a better and saner living? I do not know, but I think that it will be done by the nutrition specialists and home demonstration agents working with the farm women, the junior canning clubs, the schools furnishing hot school lunches, and in general educational work along these lines.

The colony cooperative gardens as developed in Europe are worthy of serious study for use especially in our cities. These are really permanent small fruit and vegetable gardens grouped together usually on rented ground. They were first used in Denmark in 1883 and soon thereafter spread to Norway, Sweden, Finland, Holland, England, France, and Germany. These gardens have resulted in better and happier living, improved health, and the saving of more money by the people having them. As early as 1820 the group city gardens were developed in Germany under the name of Scherbergartens.

Better Homes.

As extension work develops it gets nearer and nearer the farm and village homes and we must make good in reaching and improving these homes as well as in helping to increase the annual income. Our part is to improve the outdoor homes, that is, the lawns, the flower beds, the shrubbery beds, the

shade trees, the walks, etc. If the farm men cannot be interested in this subject through the county agents, the farm women can be interested through the home demonstration agents. Perhaps the first step will be to teach the county agents and home demonstration agents enough of the fundamentals to arouse action toward a small beginning.

The idea of home demonstration agents doing yard improvement is new in the Northern and Western States, but has been used successfully in the Southern States since 1919 where there are now 117 demonstrations under way. Only one county agent in the South is doing this kind of work; he has four yard demonstrations.

It would seem well to start some of this work in a small way in a few of the counties of each state. If an influential farm or village woman would make a start in the way of cleaning up the yard, seeding the lawn, mending the fence, or planting a few flowers or shrubs or shade trees, and would associate two or three of her friends with her into a landscape ring, each doing something in the way of yard improvement, a real start would be made. A striking example of getting something started is that of the home demonstration agent of Hamilton County, Tennessee, who induced 110 farm women to have some improvement made on the foundation of their houses, such as building a lattice or wall, planting vines, flowers or shrubs, or making some other foundation improvement. A humble beginning like this will lead to great results as the southern figures show. Here are a few of the 1921 results for reflection:-- fences repaired around home 6925; unsightly buildings repaired or removed, 3484; lawns seeded, 1955; people who planted trees, 8308; people who planted shrubs, 11,276; people who planted flowers and vines, 42,396; number of trees and shrubs planted, 53,090. It seems rather astounding that such results are obtained the third year after the project began.

Junior Club Work.

One of our greatest opportunities to do constructive work of lasting fame is with the boys and girls. Of the 11,000,000 farm boys and girls in the United States, only 600,000 are now in club work of any kind. By co-operating with the junior club departments we ought to be able to get 25,000 boys and girls started in fruit club work in 1923. The club departments should do the organizing and direct the seasonal operations through county agents, home demonstration agents and local leaders. The state fruit specialist should furnish subject matter and timely suggestions and give such personal attention to the project as time permits.

As a rule juniors do not care to wait long for financial returns so the strawberry is the most promising fruit for club work. To prove the possibilities of this line of effort we need only refer to the splendid work done by Illinois last spring in organizing 736 boys and girls into strawberry clubs planting nearly a quarter of a million plants. This is easily the most outstanding piece of small fruit extension work in 1922 and might well be emulated in other states. The goal set by Illinois in this project for 1923 is one million plants. In the Southern States in 1921 there were 1472 club girls demonstrating strawberry growing. One girl in South Carolina made

\$165.25 from 1/11 acre of strawberries, this is at the rate of \$1817.75 per acre. In one county the club girls planted 8800 strawberry plants last year.

The blackberry, dewberry, raspberry and grape are longer time propositions than strawberries, but there is a place for them in the North as well as in the South where about 4000 club girls are demonstrating how to grow them.

Orchard club work should be very greatly increased. Indiana has the apple club work well established in the county agricultural high schools with the Smith-Hughes vocational teachers as club leaders. There are now 31 of these leaders. The work is handled in two ways, by class clubs, using an orchard for each club, and by other clubs using the home orchards individually. There are 18 class clubs using orchards containing 1180 trees. All of the members of each club share in the work of the club orchard. In the other clubs each member does his work on a few trees in the home orchard. There are 89 boys doing this home club work on 2880 trees.

In York County, South Carolina club members planted 3701 apple, pear, quince, peach, plum, cherry, fig and pecan trees, and 240 grapevines last year. In the Southern States, 3266 club girls were demonstrating orchard work in 1921. Nine hundred twenty-three girls worked with apples, 1669 with peaches, 632 with pears, 256 with citrus and 642 with nut trees. The girls using more than one kind of fruit are counted more than once in the last sentence, but not in the total number, 3266.

The junior garden club work should be kept going at full speed. In 1921 the southern club girls grew and sold nearly \$120,000.00 worth of vegetables besides providing \$216,000.00 worth for home use. An off-shoot of garden work is club work with flowers. Last year in the South there were 10,344 club girls demonstrating the growing of flowers. Near cities this project can be made quite profitable by growing the kinds in demand as cut flowers.

Another subject of considerable importance, though not always of club calibre, is that of making collections of native nuts to include in club exhibits at county, state and other fairs, and to search out the very best native black walnut, butternut, pecan, hickory nut, hazel or other nuts in any section. The fair authorities ought to be induced to offer prizes for collections of native nuts as well as for the best sample of each kind. This is being done at a few fairs and some of the state club people are taking considerable interest in the subject. We need most of all a large native hazel of thin shell and good quality. Trust the boys of any community to know where the best wild nuts grow.

Conclusion.

This address is not intended to discuss all of the points connected with fruit and related demonstration work, but rather to direct attention to some of the outstanding things being done and to others which would be worth

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